

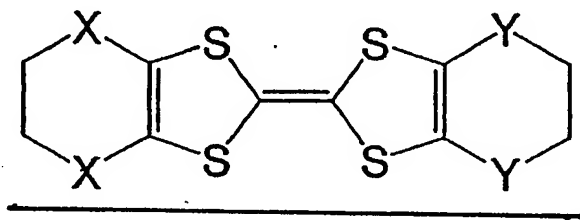
AMENDMENTS TO THE CLAIMS:

*Please amend the claims as follows:*

1-7. (Cancelled)

8. (Currently amended) An electrochemical device comprising a positive electrode, a negative electrode and an electrolyte, wherein

at least one of said positive and negative electrodes comprises a compound having a structure represented by the general formula (4):



where X and Y are independent of each other and each represents a sulfur atom, an oxygen atom, a selenium atom, a tellurium atom or a methylene group.

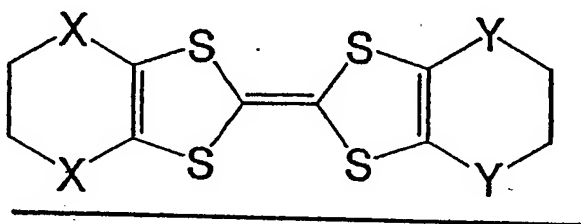
wherein said compound comprises a polymer compound having a plurality of the structures represented by the general formula (4), and

~~The electrochemical device in accordance with claim 7, wherein~~ said polymer compound has a polyacetylene chain as a main chain.

9-13. (Cancelled)

14. (Currently amended) An electrochemical device comprising a positive electrode, a negative electrode and an electrolyte, wherein

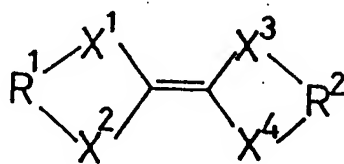
at least one of said positive and negative electrodes comprises a compound having a structure represented by the general formula (4):



where X and Y are independent of each other and each represents a sulfur atom, an oxygen atom, a selenium atom, a tellurium atom or a methylene group,

~~The electrochemical device in accordance with claim 1,~~ wherein said positive electrode includes said compound as a positive electrode active material; and said negative electrode includes, as a negative electrode active material, at least one selected from the group consisting of a lithium metal, a lithium-containing composite nitride and a lithium-containing composite titanium oxide.

15. (Previously presented) An electrode active material for an electrochemical device comprising a compound having a structure represented by the general formula (1):

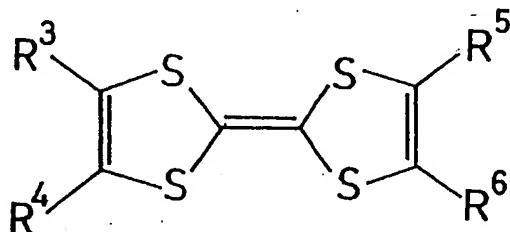


where R<sup>1</sup> and R<sup>2</sup> are independent of each other and each represents a linear or cyclic aliphatic group; X<sup>1</sup>, X<sup>2</sup>, X<sup>3</sup> and X<sup>4</sup> are independent of each other and each represents a sulfur atom, an oxygen atom, a selenium atom or a tellurium atom; and said aliphatic group can comprise at least one selected from the group consisting of an oxygen atom, a nitrogen atom, a sulfur atom, a silicon atom, a phosphorus atom and a boron atom,

wherein said compound comprises a polymer compound having a plurality of the structures represented by the general formula (1) and said polymer compound has a polyacetylene chain as a main chain.

16. (Original) The electrode active material for an electrochemical device in accordance with claim 15, wherein

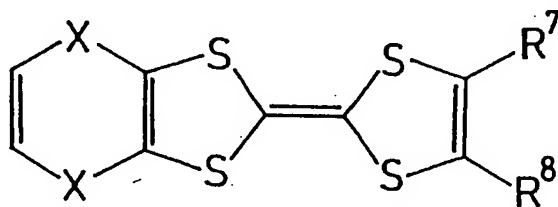
said compound is represented by the general formula (2):



where R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> are independent of each other and each represents a linear or cyclic aliphatic group, a hydrogen atom, a hydroxyl group, a cyano group, an amino group, a nitro group or a nitroso group; and said aliphatic group can comprise at least one selected from the group consisting of an oxygen atom, a nitrogen atom, a sulfur atom, a silicon atom, a phosphorus atom, a boron atom and a halogen atom.

17. (Original) The electrode active material for an electrochemical device in accordance with claim 15, wherein

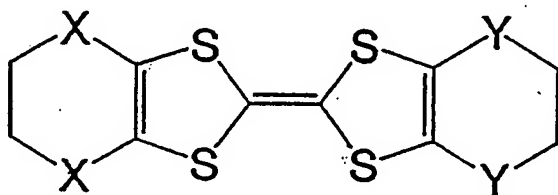
said compound is represented by the general formula (3):



where  $R^7$  and  $R^8$  are independent of each other and each represents a linear or cyclic aliphatic group, a hydrogen atom, a hydroxyl group, a cyano group, an amino group, a nitro group or a nitroso group; X represents a sulfur atom, an oxygen atom, a selenium atom or a tellurium atom; and said aliphatic group can comprise at least one selected from the group consisting of an oxygen atom, a nitrogen atom, a sulfur atom, a silicon atom, a phosphorus atom, a boron atom and a halogen atom.

18. (Original) The electrode active material for an electrochemical device in accordance with claim 15, wherein

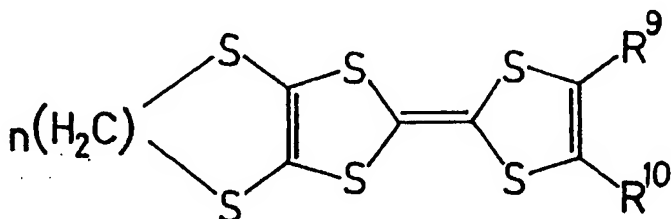
said compound is represented by the general formula (4):



where X and Y are independent of each other and each represents a sulfur atom, an oxygen atom, a selenium atom, a tellurium atom or a methylene group.

19. (Original) The electrode active material for an electrochemical device in accordance with claim 15, wherein

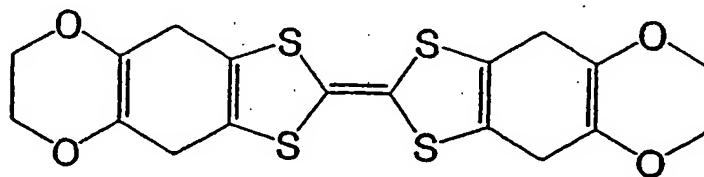
said compound is represented by the general formula (5):



where  $R^9$  and  $R^{10}$  are independent of each other and each represents a linear or cyclic aliphatic group, a hydrogen atom, a hydroxyl group, a cyano group, an amino group, a nitro group or a nitroso group; said aliphatic group can comprise at least one selected from the group consisting of an oxygen atom, a nitrogen atom, a sulfur atom, a silicon atom, a phosphorus atom, a boron atom and a halogen atom; and  $n$  is not less than 1.

20. (Original) The electrode active material for an electrochemical device in accordance with claim 15, wherein

said compound is represented by the chemical formula (6):



21-22 (Cancelled)

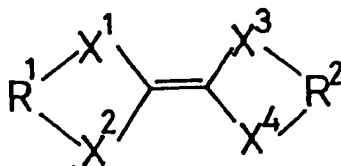
23. (Previously presented) The electrode active material for an electrochemical device in accordance with claim 15, wherein said polymer compound forms a film.

24-27. (Cancelled)

28. (Original) The electrode active material for an electrochemical device in accordance with claim 15, further comprising a substrate carrying said compound, wherein said substrate and said compound are bonded by a chemical bond.

29. (Previously presented) An electrochemical device comprising a positive electrode, a negative electrode and an electrolyte, wherein

at least one of said positive and negative electrodes comprises a compound having a structure represented by the general formula (1):

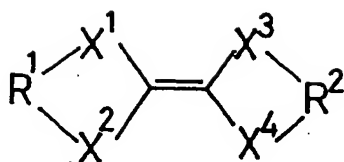


where R<sup>1</sup> and R<sup>2</sup> are independent of each other and each represents a linear or cyclic aliphatic group; X<sup>1</sup>, X<sup>2</sup>, X<sup>3</sup> and X<sup>4</sup> are independent of each other and each represents a sulfur atom, an oxygen atom, a selenium atom or a tellurium atom; and said aliphatic group can comprise at least one selected from the group consisting of an oxygen atom, a nitrogen atom, a sulfur atom, a silicon atom, a phosphorus atom and a boron atom,

wherein said compound comprises a polymer compound having a plurality of the structures represented by the general formula (1), and said polymer compound has a polyacetylene chain as a main chain.

30. (Previously presented) An electrochemical device comprising a positive electrode, a negative electrode and an electrolyte, wherein

at least one of said positive and negative electrodes comprises a compound having a structure represented by the general formula (1):



where R<sup>1</sup> and R<sup>2</sup> are independent of each other and each represents a linear or cyclic aliphatic group; X<sup>1</sup>, X<sup>2</sup>, X<sup>3</sup> and X<sup>4</sup> are independent of each other and each represents a sulfur atom, an oxygen atom, a selenium atom or a tellurium atom; and said aliphatic group can comprise at least one selected from the group consisting of an oxygen atom, a nitrogen atom, a sulfur atom, a silicon atom, a phosphorus atom and a boron atom,

wherein said positive electrode includes said compound as a positive electrode active material; and said negative electrode includes, as a negative electrode active material, at least one selected from the group consisting of a lithium metal, a lithium-containing composite nitride and a lithium-containing composite titanium oxide.

31. (Cancelled)